Exposure Response Modeling Analyses

- Regression Trees
- Starting Values
- Variable's Inclusion/Exclusion
- Heterogeneity
- Convergence
- Goodness of Fit

Exposure Response Modeling Analyses

- Specifying Starting Points
- Tests For The Significance of Parameters
- Residual Plots
- Test For Global Minimum

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Repeated Measures Modeling

- Model (Gender, Smk status, week)
- Covariance Structure
- Tests
- Sample Size for Main Study Test variability to determine if diff for smk and non-smk.

Group option on repeated
Nonparametric pairwise testing (85%

Biomarker = Group + Gender + Week + Other Covariates + Group*Week + Subject + Random Error

Where:

Biomarker	= Biomarker from the list of Biomarkers
Group	= Smokers, Non-Smokers
Week	= Weeks when the biomarker was collected
Other Covariate	= Other covariates of interest
Group*Week	= Group by Week interaction
Subject	= Between subject error
Random Error	= Within subject error

Akaike's criterion will be used to decide on the covariance structure. The intra-subject variability and the inter-subject variability will be used in conjunction with nQuery Advisor to determine the required sample size for the main study.

Supplementary Analyses

TABLE 14.5-3
COMPARISON BETWEEN SUBJECTS EXPOSED AND SUBJECTS NOT EXPOSED TO ENVIREMENTAL TOBACCO SMOKE WITHIN A 3 DAY PERIOD OR 3 MONTHS PERIOD BEFORE SAMPLE COLLECTION

BIOMARKER	Statistic	Exposed	Not-exposed	P-value[a]
Cotinine (units)	N			
	MEAN, GEO MEAN			
	SD,SE			
	MEDIAN			
	MIN,MAX			
	5%,95%			

RAP NOTE: Biomarkers analyzed are Cotinine, combined nicotine metabolites, and 4 ABD-Hb adducts.
[a]P-value from a parametric or a non-parametric test.

Supplementary Analyses

TABLE 14.-5-4
COMPARISON BETWEEN NONSMOKERS EXPOSED AND NONSMOKERS NOT EXPOSED TO ENVIREMENTAL TOBACCO SMOKE WITHIN A 3 DAY PERIOD OR 3 MONTHS PERIOD BEFORE SAMPLE COLLECTION

BIOMARKER	Duration	Statistic	Exposed	Not-exposed	P-value[a]
Cotinine (units)		N			
		MEAN, GEO MEAN			
		SD,SE			
		MEDIAN			
		MIN,MAX			
		5%,95%			

RAP NOTE: Biomarkers analyzed are Cotinine, combined nicotine metabolites, and 4 ABD-Hb adducts.
[a]P-value from a parametric or a non-parametric test.

Supplementary Analyses

- Regression analyses will be performed to determine if a relationship exists between duration and biomarkers of exposure.
- Regression analyses will be performed to determine if a relationship exists between weighted duration and biomarkers of exposure.
- Regression analyses models will depend on the Repeated analyses results.

Supplementary Analyses

Comparison of the laboratories results:

```
proc mixed data=one;
  class subject gender group week;
  model labdiff = group gender week group*gender group*week
                  group*gender*week/ddfm=satterth;
  repeated  week/type=ar(1) sub=subject;
  /* or CS or UN. The covariance structure with values of  */
  /* the criteria (Akaike's Information Criterion) */
 /*  closest to zero are most desirable  */
```

then look at intercept

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